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12/19/11



Re: Draft Final EW ERA

Ravi Sanga to: Dan Berlin

12/19/2011 10:47 AM

Debra Williston - Work, Debra Williston - Home, Gary Pascoe, Doug
Cc: Hotchkiss, Jeff Stern, Kirsten Payne, Pete Rude, Scott Becker,
Susan McGroddy, Kym Takasaki, Tom Wang, Erika Hoffman, peter

Doug, Dan and Susie -- Attached are remaining comments on the Draft Final ERA for East Waterway. In particular, we need to set up a call to further discuss arsenic as a risk driver for J. Salmonids. Let me know what works for the EWG, regrading dates, and I'll set up the call. If you have any other questions regarding EPAs comments on the draft final ERA, let me know that as well.

regards,

Ravi



Draft final comments 12-15.doc

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Dan Berlin

Ravi, The draft final ERA has been posted to the...

10/25/2011 09:43:48 PM

From: Dan Berlin <dberlin@anchorqea.com>
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Date: 10/25/2011 09:43 PM
Subject: Draft Final EW ERA

Ravi,

The draft final ERA has been posted to the East Waterway website. It has been posted to both the EPA version and stakeholder version. The document has redline text addressing EPA comments. In addition, two rockfish samples that were accidentally omitted from the draft ERA have been added. The additional rockfish resulted in changes to Maps 4-1 and 6-12. The complete map folio has been posted for your review. The only attachments that have been amended are Attachments 2,3 and 5 and all changes to the attachments are in redline as well. Please let me know if you have any questions or concerns.

Logon credentials for the EPA and Stakeholder websites are provided below.

www.eastwaterwaygroup.com

The site has two levels of login credentials. Please enter the login and pass information when initially

USEPA SF



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prompted:

Login: (b) (6)

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EPA Login Information

www.eastwaterwaygroup.com

website login: (b) (6)

EPA login: (b) (6)

Stakeholder Login Information

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Anchor QEA's Seattle office has moved. Please update your records to reflect our new address.

US Environmental Protection Agency Comments, East Waterway Operable Unit. Harbor Island Superfund Site, Supplemental Remedial Investigation/Feasibility Study, Draft Final Baseline Ecological Risk Assessment, October 25, 2011

Specific Comments

- 1) **Page 38, Section A.2.3.3.4 (Harbor Seal as surrogate for Orca):** Revise the last sentence of this section to read, "Orcas feed on salmon which spend a small part of their lives in the LDW or EW and therefore would be expected to have a low exposure to sediment-associated chemicals in the EW."
- 2) **Page 44, Section A.2.4.1.2.** Please clarify the text to indicate that no historical datasets were excluded.
- 3) **Page 48, Section A.2.4.1.3.** Please present box plots of the two metals datasets for surface water
- 4) **Page 112, Section A.2.6.** Revise text as shown (delete "may be" language) "Water and sediment contact pathways are considered insignificant compared with other pathways for wildlife because the feathers and fur on birds and mammals limit direct exposure of their skin although some areas are more exposed (e.g., the legs and feet and under the wings for birds)."
- 5) **Page 58, Section A.2.3.2.3 (Brown Rockfish):** Delete the entire second paragraph in the section as it is a repeat of the 3rd paragraph in the same section.
- 6) **Page 80, Section A.2.5.2.1 (Fish COPCs based on tissue-residue data):** Delete reference to the Matta et al. 2001 study. EPA is unable to see how results from this study represent an example of greater sensitivity in adult fish relative to early life stages (particularly for mercury).
- 7) **Page 83, Section A.2.5.2.1 (Fish COPCs based on tissue-residue data):** Change the end of the first paragraph as follows to clarify why a range is presented associated with the Mauck et al., (1978) study:

"This TRV is likely protective of juvenile Chinook salmon growth. A study by Mauck et al. (1978) reported no effects on growth in brook trout fry exposed to Aroclor 1254 at an aqueous concentration of 0.69 ug/L. This study observed significant reductions in weight after 48 days of exposure, however no tissue residues were evaluated at that time. Residue concentrations associated with no effects ranged from 1.8 mg/kg ww in fish exposed for 7 days to 31 mg/kg wet in fish exposed for 118 days while concentrations associated with effects ranged from 3.2 mg/kg wet (7 days) to 71 mg/kg wet (118 days)."
- 8) **Page 165, Section A.4.2.1.2 and page 275, Section A.6.2.2.2 (TBT TRV Uncertainty):** Delete the bullets discussing uncertainties associated with the 2003 Shimasaki et al. paper. Instead, add the following sentence to the text at the bottom of pages 165 and 275:

“An additional uncertainty associated with this study was that the parental fish were experimentally manipulated to produce only female offspring, which were subsequently used for the TBT toxicity experiments.”

The other two bullets (re. the effect of masculinization on growth and the relevance of reduced survival in a long-term teleost study) contain speculative conclusions with which EPA does not agree with and that are not appropriate given that this study was not selected as the basis for the TRV.

9) Page 175 - 177, Section A.4.2.2.2 and A.4.2.2.3 (Cadmium and Copper dietary TRVs): Remove all reference to the Handy 1993 study (from text and Table A.4-18). It must be excluded from use in TRV derivation because the author states that the fish expelled the ingested food making the received dose unknown.

10) Page 234, Section A.6.1.1.1: Sediment samples where the reporting limit exceeded the SQS but there were no detected exceedances were not treated as exceedances. Please state explicitly that this could underestimate risk because it assumes the nondetects are below the SQS when actually they could be above the SQS.

11) Page 241, Section A.6.1.1.2 (Uncertainties associated with Tissue-residue risk estimates – Benthic): Add the following text to the end of the 2nd paragraph in this section:

“Furthermore, laboratory studies typically use organisms that are tolerant to stress and have short life spans and therefore do not represent many field organisms' sensitivity or contaminant exposure duration.”

12) Page 253, Section A.6.1.2.1 (Crab Tissue residue uncertainties): Add the following text to the end of the 2nd paragraph in this section:

“Furthermore, laboratory studies typically use organisms that are tolerant to stress and have short life spans and therefore do not represent many field organisms' sensitivity or contaminant exposure duration.”

13) Page 259, Table 6-16. More discussion between EPA and the EWG is needed regarding the use of stomach contents in determining whether arsenic should be a risk driver for juvenile salmonids.

14) Page 263, Section A.6.2.1.2 (Uncertainty analysis – Salmon), 1st complete paragraph: Add the following text to the end of the paragraph:

“Furthermore, laboratory studies typically use organisms that are tolerant to stress and have short life spans and therefore do not represent many field organisms' sensitivity or contaminant exposure duration.”

15) Page 265, (Selection of salmon-specific TRVs for cadmium and copper), 2nd paragraph:

Remove Handy (1993) reference. This reference was already removed from Table 6-20 but is still included in the text for copper. Please delete this reference from Table A.6-21 and revise the 2nd sentence in this paragraph to read as follows:

“Salmonid-specific dietary NOAELs were reported in nine studies and ranged from 200 mg/kg dw for the survival of rainbow trout exposed to copper for 32 days (Handy 1992) to 1,042 mg/kg dw in juvenile rainbow trout for 28 days (Kamunde et al., 2001).”

16) Page 278, (PCB TRV Uncertainties), first full paragraph on page: Revise the paragraph to clarify that pre-exposure to PCBs in control fish may result in increased resistance in a control population.

“One uncertainty in the Hansen et al. (1974a) study was that elevated PCB concentrations of 0.52 to 0.64 mg/kg ww were observed in control fish, which are higher than reported effects concentrations from Hugla and Thome (1999). Fish can develop resistance to PCBs (for example, Wirgin, J.R. Waldman / Mutation Research 552 (2004) 73–100), and the fish used in this study appear to have been already exposed to PCBs and may be resistant. Another uncertainty was associated with this study’s enhancement of egg production through the injection of fish with human chorionic gonadotrophic hormone. Potential confounding effects of hormonal injections on egg survival are unknown.”

17) Page 289, (Uncertainty in Rockfish TRVs), first paragraph on page: Revise the 2nd sentence to read,

“If the next highest LOAEL of 9.3 mg/kg ww from Hansen et al. (1974a) had been used in the risk calculations, the LOAEL HQ for brown rockfish would have been 0.43.”

18) Page 321, Section A.7.2 (Risk Driver Evaluation for Fish), 5th paragraph: Revise the highest HQ reported for TBT in an individual rockfish to be 1.4 (rather than 1.6).